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(54) **Peptide substrates and method for the quantitative assay of endotoxin.**

(57) The subject matter of the invention is a peptide-based compound for utilization in the assay of endotoxin in samples by an LAL-type analysis method. The structure of the compound has the form:

X - A1 - A2 - A3 - B - R

in which X is hydrogen or a protective aromatic hydrocarbon or acyl group; A1 is a peptide chain consisting of 0-100 amino acids; A2 is glycine; A3 is arginine; B is an amide mixture and R is a molecule which, after its liberation in the LAL-type analysis, can be identified by diazotizing its liberated amine group and allowing it to react with a compound with which it combines to form a visibly coloured final product.

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	CHEMICAL ABSTRACTS; vol. 91, no. 22, 26th November 1979, page 221, column 1, abstract no. 188447g, Columbus, Ohio, US; D.B, KOHN et al.: "A peptidyl derivative of [3H]-aniline as a sensitive, stable, protease substrate", & ANAL. BIOCHEM. 1979, 97(2), 269-276	1,2	G 01 N 33/579 C 07 K 5/04 C 07 K 7/04 C 07 K 15/00
X	--- CHEMICAL ABSTRACTS, vol. 95, no. 13, 28th September 1981, page 201, column 1, abstract no. 109987q, Columbus, Ohio, US; SEIKAGAKU KOGYO LTD.: "Novel substrates for endotoxin detection", & JP - A - 81 42597 (KOKAI TOKKYO KOHO)	1-4	
A	idem	5	TECHNICAL FIELDS SEARCHED (Int. Cl.4) G 01 N 33/00 C 12 Q 1/00
X,P	--- DE-A-3 428 543 (BOEHRINGER MANNHEIM GMBH) * page 13, examples 6, 9; claims *	1,2	
E	--- EP-A-0 224 830 (MILES LABORATORIES INC.) * pages 15-16, line 5; page 29, line 19 - page 30, line 10; page 31, line 29 - page 32, line 2; claim 1 *	1,3,5	
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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 17-09-1987	Examiner DE KOK A.J.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	EP-A-0 034 122 (PENTAPHARM AG) * claims 2, 5, 11 *	1, 3	
A		2, 4, 5	
A	--- DE-B-2 141 487 (MERCK PATENT GMBH) * claims 1-4 *	1, 2, 4, 5	
X	--- DE-B-2 740 323 (SEIKAGAKU KOGYO CO. LTD.) * claims 1-4 *	1, 3	
A	--- CHEMICAL ABSTRACTS, vol. 99, no. 14, 3rd October 1983, page 697, column 2 - page 698, column 1, abstract no. 122953C, Columbus, Ohio, US; WAKO PURE CHEMICAL INDUSTRIES "Chromophoric peptides", & JP - A - 83 90535 (JAPAN KOKAI TOKKYO KOWO)	1, 2	
A	--- PATENT ABSTRACTS OF JAPAN, vol. 8, no. 85 (C-219)[1522], 18th April 1984; & JP - A - 59 6898 (TOYO JOZO K.K.) 13-01-1984 -----	1, 2	
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